

Field Trip No. 22.

North-western N. S. W. and south-western Queensland

October - November 1949

L. J. Chinnick

7546.

Genus no. 5(?), *Psakisia fuscomaculata*, *Chenopodium*
populifolia - *L. glauca* association. Dominant
Chenopodium *bernardiniana*, *Pycnostichus cruciata*
 trees in open parkland formation *L. populifolia*
 and *H. eliofolium* with *Yarran* occurring as
 an occasional. Soil red myall type with the
 presence of shallow gilgais. Pasture not uniform
 with dominant species occurring in clumps up
 to 40 ft. in diam. Gilgai areas supporting a
 dense mat of *Vib* with *Bag* (*Bassia yungueensis*)
 appearing on the outer margins.

C. n. the shily area (in predominance) *C. n.*
(centaurea militensis) together with *Vib* and *H. pc*
(Halimolobos corymbellum) occurred in patches
 with other (patches) clumps composed chiefly of
Ag (*Atriplex scabra*) *Al* (*Alhagi monnina*)
 and *H. pc*. Other plants occurring as occasional
 over the whole area were *bla* and *bet*
(Centipeda thespidoides)

7556.

Genus no. 5(?), *Psakisia fuscomaculata*, *Urtica guttulosa*,
populifolia - *L. glauca* association. The dominant
Atriplex *bernardiniana*
 tree species being *L. populifolia*. Others
 occurring as occasionals being *H. eliofolium*
 and *Teremophila Mitchellii*.

Pasture had been badly overgrazed with
Sty and *Orif* (*Aristida frimensis*) as
 co-dominants. Soil - Compact light
 red loam.

7566

Urtica sp., *Oedolobus angustifolius*, *Dialla maculata*,
populifolia - *L. glauca* association. Dominant
Chenopodium *bernardiniana*, *Pycnostichus cruciata*,
 trees being *L. populifolia*. This site situated on the
 top of a low red gravelly rise. At the bottom of the slope
Pycnostichus scabra, *Psakisia fuscomaculata*

Eremophila Mitchellii and *Cassia eremophila* were co-dominant shrubs under thick *C. populifolia*. The pasture was made up of patches of tall grasses interspersed with gravelly scolds. These were prominent on the top slopes of the rise. Pasture composed of tall tussocks of *Stipa fulcata*, *Arctida ferichensis* and *Paspalidium gracile*. *Paspalidium* becoming more prominent down the slope.

7576 ^{*Paspalia fasciculata*}
C. populifolia - *C. glauca* association. Dominant trees being *C. populifolia* and *C. glauca*, with *C. intertexta*, *Eremophila Mitchellii* and *Aet. oleosum* occurring as occasionals. The pasture consisted of a dense sward of *Stipa fulcata* with *Atriplex leptocarpum* as subordinate species. The tree density approaching that of virgin state (Savannah woodland). Soil - red loam with some scald areas present.

7586 ^{*Paspalia fasciculata*}
C. intertexta associes. Trees in open parkland formation. Pasture consisting of a tall stand of *Stipa fulcata* and *Arctida ferichensis* as co-dominants with *Atriplex pectinata*, *Paspalidium gracile*, *Rhagodia nutans* and *Trichium obovatum* as occasionals. Soil - red loam. A species of *Eremophila longifolia*? also present as odd shrubs.

7595 ^{*Macroptilium* sp., *Coryphantha* sp., *Conocarpus* sp., *Adelopus*}
bampud. *C. populifolia*, *C. intertexta* present as co-dominants with a small-flowered *Eremophila* species as a bushy shrub. Much scalding evident under and between trees. Practically no pasture present except for isolated clumps of *Stipa fulcata* and a general scattering of *Helipterum corymbosum*. *Tamulus*, *Schizanthus flavovittatus*, *Psychotrius seriatus*, *Monia guttulosa*, *Austroicetes arida*

7596. Left for Bourke non-stop. Continual heavy rain made collecting impossible.

7664

Arrived Bourke.

7666

Perida conica, *Pyrocephalus rubinus*, *Urolophus*, *guthriei*.
2 miles along the road to Nth Bourke. Collecting area—
shallow cowl with *C. coolibah* the only tree species
present. Pasture—dense *Chloris truncata* with a scattered
cover of tall *Verbena supina*.

7668

Macrobryopsis sp., *Oedalura australis*, *Histopus tenuis*,
4 miles along the road to Nth Bourke. Eastern side of the
Perida conica, *Schizobryopsis flaviventris*, *Pyrocephalus*
approach to the bridge over the River Darling. Collecting
sericans, *Peridroma*, *guthriei*.
area in an eroded washaway leading into the river. Upper
banks bare. In the base of the gully, pasture dense,
consisting chiefly of *Eragrostis setifolia*, *Bassia quinqueangula*,
Bassia Burchii and *Verbena supina*. On the tops of the
bank of the gully heavily grazed *Eragrostis setifolia* present.

7672

Back to Bourke.

7683

Left Bourke for trip along the Barrington Road.

7695

Oedalura australis, *Histopus tenuis*, *Schizobryopsis*
12 miles Nth of Bourke along the Barrington road. Situation
flaviventris, *Peridroma*, *guthriei*, *Stropis flavescens*,
Typical outback centre country. Low shallow gilgai
Chloris tenuifera, *Austrochloa pusilla*
area occupying approx 2 acres surrounded by red loam
light country. Tall *Eragrostis setifolia* being the main
grass on the gilgai area. *C. coolibah* present around the
edges and occasional tree within the gilgai area.
Light country supporting *Acacia bambaegii*—in this case
most of which had been rung. Vegetation on the light

country sparse. Numerous bands (21 counted) of *bh. terminifera* present in 2-3rd instar stage. Bands in each case only occupying small areas of from 2-6 sq yds. Appeared to have been locally produced. [Probably as feed dries off, these small bands all of which were occupying positions within the food-shelter habitat will come together to form an active swarm].

7708 *Volucra irregularis*
Arrived back at Bourke. Specimens caught attacking peaches on a tree in the yard of the Oxford Hotel.

7709 Left Bourke - Trip back towards Byrock.

7722 *Pterostichus scitatus*, *Pterostichus fuscicornis*, *Choristochor terminifera*, *Austrocyrtus pusilla*, *A. interioris*
Flood plain - trees *b. boolebahi* with odd *b. bicolor* present. Soil - heavy black clay loam. Dominant pasture species *Eragrostis setifolia*, *Bassia bicornis* with *Helipterum corybifolium* and *Goodenia* sp. as occasional. *bh. terminifera* present in the solitary phase represented both by flyers and nymphs.

7729 *Macroleptogaster* sp., *Ephraura* sp., *Coryphopterus* sp., *E. populifolia* - *Acacia* association. Dominant trees *A. excelsoi*, *Pter. corybifolium*, *E. populifolia*, *Grevillea striata* with odd trees of *Leucaena parviflora* and isolated clumps of *Peucephyia fuscicornis*, *Brassia guthrieana*, *Emmophila* (unknown species). Soil red sand loam. On slight sandy rises *Anatida ferocissima* was dominant with scattered tussocks of *Eragrostis setifolia*. In isolated low spots *Eragrostis setifolia* and *Themida ovensis* were the main pasture species with *Dactyloctenium aegyptium* as the main subordinate species.

7728 Left Bourke for Wandering.

7756

Pyroostictus serriatus
 Junction of Hungerford - Wanaaring Rd. Edge of flood plain
 Dominant trees - *E. populifolia* and *E. bocklandii*. Pasture -
 low cover mainly of *Chloris truncata* and *Brizopyron nigricans*.
 Soil - red loam subjected to scalding in small patches.

7758

Acacia guthrieana, *Acacia guthrieana*
Astrelba lappacea association - Treeless plain. *Astrelba*
~~*guthrieana*, *Chorizanthe tenuifolia*~~
 completely eaten out. Dominant pasture species being
Calceophorus Sanderi with odd plants of *Eragrostis japonica*
 present in isolated spots. Soil heavy grey self-mulching loam.
 No ants. Pasture dry except for odd *Bassia*? bushes.

7762

Pyroostictus serriatus, *Urosia guthrieana*
Acacia bambagei association. Area badly scalded with a
 good cover of *Koehia pyramidata* bushes 2-3 ft high. Soil
 red sandy loam. On the left hand side of road area badly
 overgrazed *Koehia* absent and main species being *Chloris*
truncata and *Cenchrus ciliaris*. Soil red sandy loam.
 scald very hard.

7772

Urosia guthrieana, *Pyroostictus serriatus*, *Urosia guthrieana* (16?)
E. populifolia - *Acacia* association. Site on slight sandy rise.
~~*Urosia guthrieana*, *Acacia guthrieana*~~
 Dominant trees - *Acacia bambagei*, *Casuarina lepidophloea*,
E. populifolia, *Doodanea* spp. with an occasional *Gyneria*
parviflora and *Eremophila Mitchellii*. On the sandy ridge
Eragrostis setifolia was dominant in thick clumps, under
 the trees little herbage was evident - *Chen. atriplicum*
 dominant with odd plants of *Rhagodia nutans*.

7782

Urosia guthrieana, *Azizola* sp.
 Base of slight sandy ridge. *E. populifolia* - *Acacia* association
E. populifolia dominant in depressions, on the rise *Banksia*
leucophloea and *Eremophila* being prominent. None or little
 pasture present. Odd clumps of *Eragrostis setifolia* appearing on

the crest of the sand ridge. Odd *Stipa setacea* plants present on low lying spots.

7792

7793: *Conyolobos* sp., *Lycopodium variatum*,
Had to turn back 1 mile to make suitable camp site. 7793
On the following morning drove back to flood plain of
the Warrego 7795.

7795

Conyolobos sp., *Distopis tannius*, *Chorizanthe*
Flood plain of the Warrego. *Atriplex vesicaria* association,
Idanthyrsus, *Austrosetes interioris*
Sparse *Atriplex* with *Cassia quinquecuspis* and stunted
Calceophalus Sonderi forming the pasture. Dead *E. boodibah*
dotted on the area. Soil - grey self mulching loam.

77801

Site of previous night's camp equal in forward trip
to 7793.

77805

Distopis tannius
Atriplex vesicaria association. Dominant species
Atriplex vesicaria, *Eragrostis setifolia* and some *Calceophalus*
Sonderi. Soil - grey self mulching. Odd plants of *Atriplex*
leptocarpa also present.

77815

Callitula sp., *Morpha asinus*, *Oedaleus australis*,
Eucalyptus populifolia - *Acacia* association. Dominant
trees *Acacia excelsa*, *Acacia populifolia*, *Acacia sericea*,
Acacia excelsa, *Acacia populifolia* and *Acacia sericea*.
Sand ridge and clay pan area. Grey pan under water.
Eragrostis australasica on the table drain. Sand ridge
red sand. Dominant grass (specimen) together with
Argemone mexicana (Mexican poppy).

77825

Morpha asinus, *Euphorbia* sp., *Conyolobos* sp.,
E. populifolia - *Acacia* association. Dominant trees *E. pop.*
Oedaleus australis, *Euphorbia sericea*,
Acacia excelsa, *Grevillea stricta* and odd bushes of
Peckezia justomaculata, *Artemisia gutturosa*
Eremophila sp. Dominant pasture species - *Eragrostis setifolia*

Pyropia punctata *Chorizanthe hemisphaerica*
and *Arctida ferechensis*. Soil - red compact loam. Area
badly overgrazed.

7835

Uromyces guttulosa, *Pycnostictus seriatulus*,
Acacia bambaey association. Dominant trees *Acacia*
bambaey, *Peucephyllum fuscum*, *Acacia*
bambaey, *Net. oleosum* with under shrubs of *Eremophila* spp.
Dominant species (as for 7815). Soil - red sandy loam.

Some *Dicranthium sericum* present on crests of small sand
rise. *Eragrostis japonica* on the small clay pan areas.
Mosaic effect of sand rises and clay pans with the majority
of clay pans bare or lightly vegetated.

7845

Uromyces guttulosa, *Uromyces australis*, *Pycnostictus*
seriatulus, *Acacia aneura* association - sand ridge clay pan area.
Dominant trees *Acacia aneura*, *Net. oleosum*. On the
clay pans, *E. populifolia* and *Natua leucoptera* present with
the dominant tree being *Acacia aneura*. On the clay pan
area dominant pasture species being *Arctida Behriana*,
Arctida ferechensis and *Digitaria Brownii*. On the sand
ridges *Arctida ferechensis* and *Eragrostis setifolia* forming
the major ground cover.

7855

Common-Rick: *Pycnostictus seriatulus*, *Chorizanthe hemisphaerica*, *Uromyces guttulosa*.

7867

Acacia aneura association. Dominant tree species *Acacia*
aneura, *Goodenia*, *Eremophila* spp. Pasture - *Eragrostis*
setifolia, *Arctida ferechensis* and *Sida pedunculata* with
Goodenia spp as occasional. Loose red sand.

7878

Uromyces guttulosa, *Pycnostictus seriatulus*,
Acacia aneura association. Marginal strip along
either side of river (Paroo). Dominant trees *E. bicolor* and
Muehlenbeckia bunnghamii. Pasture nil - scalded & eroded -
gulches full of water from rising river and heavy rains.
Back from the river to a sand rise. Trees - odd *E. bicolor*, *Goodenia*

sphs. and *Atalaya hemiglauc.* Pasture - *Eragrostis japonica* dominant.

7889

Acacia conica, *Pycnanthus argatus*, *Acacia* association. Dominant trees *A. annua* ^{Leaves nov. 16/9}, *Peckia fuscomaculata*, *H. erecta*, *H. longifolia* with occasional *Dodonia* and *Cremophila* spp. ^{*Pythia* sp., *Chorizandra hemisphaerica*} Pasture - clumps of *Aristida calycina*, *Aristida perichensis*, *Eragrostis setifolia* and *Lida* spp. Soil - loose red sand ~~and~~ on scalded areas the subsoil being a heavy hard red loam. [Mulgany Box]

7897

Homestead.

7899

Moraba asinus, *Tephrosia* sp., *Conocarpus* sp., *E. populifolia* - *Acacia* association. Dominant trees *A. annua* ^{*Leaves nov. 16/9*}, *Peckia fuscomaculata*, *E. populifolia* with *Cassia eximifolia* and occasional *Dodonia*, *Stipa maculosa*, *Urtica guthrieana*, *Pythia* sp. Clumps of *Eragrostis setifolia* and *Aristida calycina* formed the dominant pasture species with *Trichium* spp., *Euphorbia Drummondii* and *Ipomoea* spp. occurring as occasionals.

7904

Ursino Homestead.

7909

Moraba asinus, *Tephrosia* sp., *Stipa* sp., *Acacia* - *E. populifolia* association. Dominant trees - *A. annua* ^{*Leaves nov. 16/9*}, *Peckia fuscomaculata*, *E. populifolia* and *Cassia eximifolia*. Clay pan - sand ridge formation. The clay pan area being predominantly scalded, the little vegetation present composed of *Salsola Kali* and a *Heliotropium* spp. with odd plants of *Eragrostis setifolia*, *Eragrostis japonica* and *Aristida perichensis*. On the sand ridge *Eragrostis setifolia* dominant with odd plants of both *Aristida perichensis* and *Aristida calycina* with scattered tufts of *Stipa fuleata*.

7919

Acacia ligata association. Dominant trees *A. ligata* and *A. robusta*, with under shrubs of *Cassia campestris*. Pasture - *Eragrostis setifolia* dominant with *Eragrostis pectinacea* and *Andropogon furcatus* as subordinate species, with *Eragrostis pectinacea*, *Stenotaphrum* spp and *Sida* spp as occasional. Soil red sandy loam.

7925

High population of flying *Cassia*.

7929

Acacia ligata association. Dominant trees - *A. ligata* and *Atalaya* *deccanensis*. Pasture - mainly *Stenotaphrum* spp and *Andropogon furcatus* with *Eragrostis pectinacea*, *Andropogon furcatus* and *Eragrostis pectinacea* as subordinate. Soil red [1 mile bore]. Grazing country with small acacia present in low lying areas. High population of *Ch. formosa* flies and 3rd instar nymphs.

7930

Latent gibber rise. No trees present. Main pasture species being *Eragrostis pectinacea*, *Andropogon furcatus*, *Stenotaphrum* spp with clumps of *Andropogon furcatus* and clumps of *Bassia lanicarpa*.

7944

Camped. Orissa Bore. Bands of 4th-5th instar *Ch. formosa* nymphs. Site - a sandy flat between two gibber rises with a flood creek running through the flat. Along the creek banks and flood channels *Eragrostis* and *Andropogon* dominant with *Eragrostis pectinacea*. *Panicum decompositum*, *Eragrostis japonica* and *Stenotaphrum* spp as subordinate vegetation. Under favorable conditions probably acts as an outbreak area centre [present time].

7949

Boronia Davisii *Hemistylis* [*Leucostylis*]

7951

Here,

१९५३.

[illegible]

7948

Rich sandy plain — *Flindersia* — *Albizia* ~~casaria~~
 Dominant trees *A. hemiphrasa* *Cremophila* aff. *A. amara*
 with an occasional *Platanus* *indefinita*
 Society open grazing land with all species of trees except
Cremophila on clumps. Pasture low and moderately
 good, with dominant species being *Paspalum* *lanceolatum*
Blotus *truncatus*, *Atriplex* *prostrata*, *Conyza* *sp.*
 with odd tussocks of both *Eragrostis* *setifolia* and *sp.*
 On this area small gregarious herds of *B. termisifera*
 were present [2-3 or 4 at a time] Outbreak center type of country
 not evident in recent vicinity of this collecting site.

1970

Bore and Shearing sheets.

1972.

Booth's Station.

7956

Acacia unguis carinata n. Sand ridge clay pan
complex. Dominant trees - *Atalaya hemisphaerica*, *Albizia*
leuca extensively cleared. Dominant pasture species -
Albizia ^{fruticosa} fruticosa, *Albizia fruticosa*, *Roemeria* spp, *Bassia*

with *Eragrostis* in the hollows. *Panicum decompositum*
and *Helipterum* s/p. occurring as occasional.

7991

Salisbury Dunes.

5001

Bullecree flow. Narrow crossing between actual
Bullecree flow and Salisbury Lake. [logged twice on
Dec 20 and once with Weir's barometer. Actual crossing
through dry swamp areas of *Eragrostis australasica*.

5005

blistered Bores?

5017

Euphorbia ... dry ... Australian ...
Sand ridge - clay pan formation. *Acacia* ...
... Dominant trees *Hamamelis* with *H. leucophaea* at ...
occasional on the sand ridge. A species of *Eucalypt*
occurring at the base of the sand hill - clay pan area.
Pasture entirely annual consisting of a dense stand
mat of *Salicaria Kali* with *Senecio* spp. as the only
living cover. This was thick and confined to the sand
ridge only. On the clay pan area *Cornephorus nigricans*
and an *Helipterum* s/p. formed the main ...
Whyjonta

7920

8027

8028

blistered Dunes [No one at home]

8028

Limonium. *Cremophila* associates of *Acacia* ...
A complex of small raised sand dunes stabilised by
a *Kochia* spp. and *Chen. purpureum*, with *Salicaria Kali*
Cornephorus nigricans and odd clumps of *Eragrostis*. *Dalman*
as supporting species. Small areas of highly salt appear-
ing intermittently throughout the sand dune area.

8038

Bogged: both Weyfer names. Images, a tiny bird
in getting out. [reference of 21 October and morning
of 1st November]

8

1045

Pindara H.S.

5045

Pandora Station. Sand ridge - clay pebb formation with *Acacia* ~~arvensis~~ dominant on the sand areas and *H. lucifera* occurring as an occasional. Sand ridge up to the crest stabilized by *Muehlenbergia* spp. and *Cenchrus* ~~nigricans~~. On the crest of the ridge *Heliotropium* spp. occurred with *Smilax* spp. as the most dominant. Odd clumps of *Conyza* ~~sp.~~ *sp.* present.

5060

20 m. from beach (on a sand dune) in a
sandy plain near old Wood. Trees with patches
of *Amphispogon* and *Erigeron* spp. probably
terrestris
between long grass with *Phacelium* flowers as
are common. In wetland shallow soil the *Eragrostis*
membranacea becomes dominant.

5078

Tibetomys *hemionis*, *Austrocytes integrioris*.

8105

littered down. A creek runs nearby with *Heimia* *Sotrag-*
inophylla as dominant tree species with a glaucous
Exemphile spp. occurring as cold bushes. Higher up the
slope *Acacia aneura* became dominant. In the stony
creek *Sacchara membranacea* and *Astirebia lappacea*
being dominant with an occasional ^{plant} of *Calatol falcat*.
On the downs away from the creek area *Atrophea*
spongosa was dominant with *Bassia longicaulis* and
Bassia lanceus as the main subordinate species.

Old clumps of *Spartanum* *happorum* present in shallow
scattered over holes. Other species occurring are *crucifolia*
lancea, *Fraxinifolia* *sp.*, *Arctostaphylos* *sp.* and *Thalictrum*
proceriflorum.

5105

Turn off to Olive Downs.

5112

Border fence [Warri Warri Gate]

8115

[illegible]

8124

Along, among vegetation, including plant community of creek area, *S. boottii* & *Commelina* along the creek bank; on the small flood channels *Declieux attenuata*, *Aceria* spp. with odd tree of *Hakea* Ivory become the main shrub formation with *Hakea aurea* becoming dominant away from the actual creek area. Pasture composed of *Andropogon scoparius* with odd clumps of *Proserpinaca setifolia* and *Banksia diffusa*.

2135

Old Market - turn off for Chapman.

- 8136

8136. In general, the composition of the pebbly dunes: - *Trisetum flavescens*, *Sparganium angustifolium*, *Atriplex canescens*, with odd clumps of *Salsola vermiculata*, *Elymus hystrix*, *Bromus inermis*, with occasional plants of *Plantago varia* and *Portulaca oleracea*.

- 5146

5140. Above the red sandstone. Large flint clay from which
with the red sandstone makes the custom mill. A coarse
concrete on the ridge down to the edge of the clay
from which brown mostly sand. Clay from concrete with
Wet spurs (Tetragonia repens) with odd clumps of
of *Trigonotis* in place. On the sand ridge *Trochus* is
abundant being dominant together with *Trigonotis*
superior and *Arctide* *guthriei* with *Helix* *reptans*
present as an occasional.

- 5/4/57

Acacia, *Acacia* - *Albizia* *homolana* *albida*. Red sand
ridges & clay pan formation. On sand ridges, *Hetero*
leuceptera, *Acacia* *arabica*, *Albizia* *homolana* and
Acacia *tetragona*, *Albizia* being the principal trees, with
E. coarctata growing around the edges of the clay pan.
Pasture on the clay pan composed nearly entirely
of *Tetragonia* *expansa* and *Atriplex* *mutabilis* with odd
tufts of *Eragrostis* *japonica*. On the ridges *Trichium*
obovatum with odd tufts of *Eragrostis* *setifolia* and
Notolobos *gracilis*.

- 8150

Samet ^{range} with odd clumps of *Tridax* [first appearance of this species] *Nabea leucoptera* and *Adiantum* ^{leucophaea} being the only tree species the only pasture species being *Arctostaphylos* for ^{the} ^{most} ^{part} ^{of} ^{the} ^{range}.

- 8155

Common-Pick. : *C. citrea* sp. *Uromia* *gust.*

462

beach — between Navillee and Oyster. High population
 of *Ch. tenuifolia* present in the water. Area consisting of
 a sandy ridge with a flood clay pan area down the
 slope. Some small sand areas existing between the
 run-out of the sand ridge and the commencement of the
 clay pan area. Areas covered on the sand slope with
Eucalyptus leucoloba around the outer limits of the
 clay pan. Area cannot be regarded as a potential
 outbreak centre as the food shelter habitat was not
 existent. The high population could be due either to two
 factors: — (1) The population may be due to post-natal
 increase from the previous autumn population or:
 (2) migrant swarms laying from previous generation.
 Larvae (200) observed during May trip at this
 approximate on the Navillee-Blansby trip.
 Great hof pasture on the sandy ridge composed entirely of
Eremophila nigrescens (short leaved).

6167

[illegible]

8172

5175

Schizothorax *terrestris* *swampy*, *excellent*. Large flood flat from adjacent creek area. Excellent outbreak centre conditions. *A dense stand of Puccinellia decompositum* forming an excellent feed shelter habitat. On adjacent

Tetragonaphylla and *Atalaya hemiglauca* with one odd tree of *Grevillea striata*. Pasture almost entirely *Monarda* spp. with occasional clumps of *Salsola Kali* with *Aristida percohenis* and *Boerhaavia diffusa* n. occasional.

8227. *A. amara* association. Dominant tree species being *A. amara* with odd trees of *Grevillea striata* and *Atalaya hemiglauca*. *Eucalyptus phylophloea* appearing as some occasional single trees. Pasture - mainly annual being composed of *Trehnum obovatum*, *Brachycome* spp. together with *Malvastrum spicatum*. Odd tussocks of *Aristida percohenis*, *Eragrostis setifolia*. On the crest of a nearby sandhill *Trochilium* spp. and *Salsola australis* being prominent.

8235

~~Common~~ ^{notes on 82/88(d)}

8242

Latentie plain bordering a creek sand plain. On the sand plain *Eragrostis Dielsii* being practically the only component. On the gibber plain *Bassia lamprocarpa* and *B. divaricata* together with odd clumps of *Aristida pectinata* in isolated crab-holes formed the main cover.

8257

~~8257~~ Gibber downs: - ^{*Leucaena proc. 6(?)*} *A. lappacea* in isolated large clumps with *Atriplex spongiosa* - *peruvialis* together with small plants of *Eragrostis japonica* & *Bassia* spp. (probably *divaricata*). Area open & treeless with dense small gibbers over whole site.

8267

Nappamerie Sandhill formation away from Cooper's Creek. Camped just below homestead of the bank of the

crack. (See report of outbreak conditions in this area on separate log.) Express back from this point to the turn off to Yanks on the Marylees - Nappamerrie road. Collecting started again at this point. 8383. Tuesday 8/10/69.

- 8388 First collecting point following the turn off at 8383. *Acacia anura* association. Sand ridge - clay formation. Dominant trees in the area being *Acacia anura* with an occasional tree of the following *Grevillea striata* & *Acacia tetragonophylla*. Pasture composed chiefly of two species - *Salicola australis* and *Enneapogon nigricans* with *Neurachne* spp. *Boerhaavia diffusa* and *Wahlenbergia gracilis* as occasional.

- 8389 Marylees homestead.

- 8391 Flood creek association - *Acacia cyparophylla* associes, along the east bank of the Warri Warri creek. Sand ridges present with flood channels from the creek throughout. Dominant pasture species being *Atriplex Muelari*, *Chloris truncata*, *Salicola Hal.*, *Boerhaavia diffusa* and an *Helipterum* spp. Pasture as a whole, poor, with little density of cover.

- 8399 Wandille Dingora flood plain. A grey self-mulching silty soil evident overlying a sand bed. Pasture relatively sparse. *Panicum decompositum* and *Atriplex* spp. *Boerhaavia diffusa*, *Boerhaavia diffusa*.

spongiosa being the main spp. with odd bushes of *Koehia aphylla* present confined mainly to the edges of little Dingers creek. Trees lining the creek being *Eucalyptus boodibai* & *Tremophila maculata*.

8400 A number of small aggregations of 5th instar *Ch. terminifera* hippura. [sand plain]

8404 Similar setup as for 8400.

8407 Big Dingers Creek. Large flying swarm of *Ch. terminifera* present Nth of the creek crossing. This swarm extended apparently for the next 2 miles. The day being extremely hot little activity was evident except when flushed by the moving truck. The majority of members of this swarm appeared to have newly moulted. Area affected being gibber downs type of country with predominant pasture spps being *Bassia* and *Atriplex spongiosa*. The little movement within the swarm seemed to be S.E.

8417 Bransby Homestead.

8442 Camped for night. A narrow gibber plain between a creek and rising sand hills. plain from $\frac{1}{4}$ - $\frac{1}{2}$ mile wide. Pasture scattered being composed of *Bassia* spp. [?] *Eragrostis latifolia*? and *Arctostaphylos leptocarpa* with odd clumps of *Patrella lappacea*, *Calceolaria* and *Portulaca* spp.

8445

Sand hill formation — *Acacia anura* association.
 Trees *Shorea*, *Lodonia*, and a glaucous, *temnophila*
 spp. Pasture composed chiefly of *Arctostaphylos*
 with odd bushes of *Bassia bicornis*. Some gopher
 stones being exposed at the base of the sandhill
 suggesting perhaps that the area was formerly
 gopher plain but encroaching sand has since
 been permanently stabilized.

8451

Common - high & low.

Arctostaphylos *temnophila*
Arctostaphylos *temnophila*

8467

Neocandora. From 8442-8451. 17 flying
 swarms [not dense] were observed. 22 miles to the
 S.W. of *Neocandora* gopher flats are traversed by
 at least 7 flood creeks and as such has possibilities
 of constituting an outbreak area. [see report]

News this day from Const. Kearney. Can't get within
 6 miles of Durham Downs. Route to Torachi Creek
 impassable. Rain has fallen somewhere between
 Nochatunga and Ki-hee stations. Kearney advises
 not to take any risks with the Cooper flood plain
 creek rising. Church ago Creek at Durham Downs
 was 3 ft rising. Nochatunga at 5 ft still rising.

8472

~~8472~~

Outbreak centre complete [see report] *Arctostaphylos* *temnophila*
Arctostaphylos *temnophila*

8476

Eucalyptus — *Acacia* association. — flooded sand plain
 area. Trees *Eucalyptus ochrophloia* and *Acacia* spp.
 Pasture extremely sparse consisting of *Chen. aeneum*
 in shallow hollows with some *Crag. japonica* in isolated
 tufts. Samphire flats present but clouds of mosquitoes

made collecting from this area impossible.

8486

Mechalinga Homestead. [8488 - back to 8489 - then on to 8488 - 8490. Express through to Ki-hee.

8488

8488

8510

Common - Pink soil. Camped Ki-hee Homestead. Next day straight through to Cooper's Creek area. This allowing for picking of collecting sites for the return run that should be satisfactory to all the various collectors.

8569

First channel of Cooper's Creek. Water running in this channel. End of the forward trip. Heavy storm threatening. returned to sand hill area at 8581.

8581

Camped on sand hill area on the edge of the flood plain. Trees. *Acacia aneura* with odd trees of *Allocasuarina hemiglaucoides*. Pasture turkeys, *Eragrostis setifolia* and *Chistida calycina*.

8586

Woomoonooka [ruins]

8593

Lunch. Lybster lateritic hills. Stunted *Allocasuarina hemiglaucoides* with odd trees of *Eucalyptus ochrophloia* present. Main species being *Acacia tetragonaphylla* and dead *Acacia aneura*.

Between 8591 - 8602, 13 swarms of *Ch. terminifera* observed and between 8608 - 8630 another 6 flying swarms seen.

8608
= 8634

Camped on rocky range. Passed camp by 13 miles - had to return to same at 8634 - 8608.

Stony lateritic hills with a creek in the gully.
Creek area containing *Cyperus* spp and *Lulalia fulva*.
On the rocky hills, *Salicula australis* with *Eriopogon*
nigrescens being dominant, with odd plants of *Bassia*
bicornis present. ^{*Chorizanthe tenuifera*} Trees along the creek consisting of
Eucalyptus pyrophora and *Sprueella striata* with an
occasional *Atalaya hemiglaucæ*. On the stony hills
Acacia tetragonophylla dominant with an odd tree of
both *Eucalyptus pyrophora* and *Acacia aneura*.

8648 Turn off to Ki-hee through Bundina.

8651 Ki-hee homestead.

8662 Flood creek area. Trees - *Cammaldulensis* lining the
creek with *E. pyrophora*. *Nakea Georgi* and small clumps
of *Exmophila* away from creek bank. Pasture - dense,
green and tussocky, composed of *Lulalia fulva*, *Eragrostis*
setifolia with *Malvastrum spicatum* and *Helipterum* spp
as occasionals.

8672 Bore - 5 miles N.E. of Nochatunga - flat sand plain area adjacent
to creek area. Pasture - green cover of *Verbena* spp with
odd plants of *Lulalia fulva* and *Antrelia leppacea* in isolated
shallow depressions.

8677 Nochatunga Homestead. Express through to Bransby.

8693 Nocondara.

8700 Camped on sand hill. 7 miles SW of Nacandera.

8722 Bransby Homestead. express to Turn off from Nanyoles-
Bransby Rd. to Tichalora.

8762 Turn off at little Dingera creek to Tichalora.

8766. *Acacia aneura* association - sandhill formation.
Atalaya hirsuta dominant with *Acacia cyperophylla*
as the prominent under shrub together with *Dodonaea* spp.
Pasture being extremely low in density. The cover present
composed of *Salicola australis*, *Trichinum obovatum*,
Salicola Kali, *Sida* spp and a *Bassia* spp (large woolly head)
Sand hill running NE-SW about 200 yds wide.

8780. Crest of Grey range 6 miles W of Tichalora. Rocky hills
with a good low timber cover of *A. aneura* (narrow leaf)
^{*Chorizandra tenuifolia*, *Austrobaileya integrifolia*}
with odd shrubs of *Acacia tetragonophylla* and stunted
Atalaya hirsuta. Pasture - mainly *Bassia divaricata*
Trichinum obovatum with some tufts of *Eragrostis*
and *Astrelia lappacea*.

8786 Tichalora Homestead.

8800

Edge of Bulloo overflow. [see notes re outbreak area]

8802

Flood creek leading into Bulloo. ^{*Acrolophus*} *Chor. aureoventer*
dominant along the edge of the creek with odd clumps of
Eragrostis setifolia and *Chloris truncata*. Away from

The creek *Atriplex farinosa*, *Malvastrum spicatum*
and *Cercopithecus* spp. Soil grey self-mulching loam.

8810

Sand ridge — *Eremophila* spp. dominant. Little pasture
except for a large yellow-flowering legume.

8812

Symphoricarpos Homestead.

8816

Border fence. Gravelly downs. — Treeless. *Bassia*
lanicuspis, *Bassia divaricata*, *Chorizanthe procumbens*,
Atriplex spongiosa with clumps of *Atriplex laevis*,
constituting the pasture. Pasture commencing to dry out.

8822

Rocky hill. Odd *Acacia cambridgei* present at the base of
the hill. *Bassia divaricata* dominant, with odd clumps of
Atriplex spongiosa and *Salsola australis*.

8839

Gravelly downs. — Pasture dry off *Atriplex spongiosa* and
Bassia divaricata. Area treeless.

8853

Tibookarra. Collection from rocks — *A. aneura* scrub 1 mile
Sth. of the town area. *Chorizanthe terminifera*

8858

Left Tibookarra. *Bassia divaricata* and *Salsola australis*.

8892

Atriplex vesicaria — *Kochia setifolia* association. Site on
a Basalt-Quartzite ridge. Dominant pasture species on
the crest of the ridge being *Atriplex vesicaria* and
Eremophila nigricans. As one proceeded down the slope
Atriplex vesicaria gave way to *Kochia setifolia* with
odd clumps of *Eremophila* *Dillii* and *Atriplex spongiosa*.
Creek nearby with *Eucalyptus camaldulensis* lining its

banks. away from the creek but not on the slope
several large trees of *Grindelia striata* were present.
Ch. terminifera on solitary plants evident.

- 8877 *Lythrum (Acaia bambusa)* association on a quartzite ridge. Dense cover of *Atriplex spongiosa*, *Bassia lanicuspis*, *Bassia ~~divaricata~~* with small patches (in sandy places) of *Encarpogen nigricans*. Trees *Acaia bambusa*. Few solitary phase *Ch. termonifera* present.
- 8882 Milpantka creek area. Sand plain. Pasture: - *Eulalia fulva*, *Veronica* spp., *Atriplex spongiosa*, *Montanoa militensis*, *Eragrostis Delavii* with some *Astilbe pectinata*. Density of plant growth scattered. Odd *Ch. termonifera* present.
- 8889 Latentia hill. *For Acaia anura* present with an occasional shrub of *Acaia tetragonaphylla*. Pasture thin in density consisting of *Atriplex spongiosa*, *Salicola australis*, *Encarpogen nigricans*, some *Arctostaphylos*, *Bassia lanicuspis* with an occasional bush of *Kochia sedifolia*. Few flying *Ch. termonifera* present.
- 8895 Flood plain 13 miles Sth. of Milpantka. Heavy self-mulching soil with few trees present. Long & shallow flood channel, these being *E. cammaldulensis* and *E. coelilab*. Away from the creek *E. coelilab* appeared only. Pasture light in density. *Atriplex spongiosa*, odd clumps of *Eragrostis japonica* and *Astilbe lappacea*. In deeper depressions *Chenop. auricomum* dominant with *Lepidium*

- 8952 *Mitrasacme* *breckia* area. Sand plain. Pasture: -
Eulalia fulva. *Verbena* spp. *Chrysopsis* *spongosa*. *Plantago*
multensis. *Eragrostis* *Dalzielii* with some *Astilbe*
pectinata. Density of plant growth scattered. Odd
Ch. *Termonifera* present.

- 8889 *Latentia* *hull.* *For* *Acacia aneura* present with an occasional shrub of *Acacia tetragonaphylla*. Pasture thin in density consisting of *Adiantum spongiosum*, *Salicola australis*, *Encarpus nigricans*, some *Arctida leptopoda* *Bassia lanicuspis* with an occasional bush of *Kochia setifolia*. *For* flying *Ch. tenuifera* present.

- 4895 Flood plain 13 miles Sth. of Melpurankar. Heavy self-mulching soil with few trees present. Long & shallow flood channel. These being *E. cammaldulensis* and *E. coelibah*. Far from the creek *E. coelibah* appeared only. Pasture light in density. *Atriplex spongiosa*, odd clumps of *Eragrostis japonica* and *Astilbe lappacea*. In deeper depressions *Chenop. auricomum* dominant with *Lepidium*

lysocephalum. Only species present being *Bh. terminifera*
Old dead bodies of *Strylitrana* spp. seen.

8909

Acacia anura association. Trees. *Acacia anura*, *Atalaya*
hemiglaucæ. Sandhill formation. Pasture sparse. *Eragrostis*
Dalzielii, *Boerhaavia diffusa*, *Salsola Kali*. Dominant
species being a large white composite (specimen).

8919

Lebham Lake - camp. Sand hill formation & *Acacia*
anura association. Only trees present being several stunted
Atalaya hemiglaucæ's. Pasture - mainly *Salsola Kali*
Boerhaavia diffusa, small tufts of both *Emicapegon*
spp and *Eragrostis japonica*. The large composite as in
8909 also present and dominant. Few adult *Bh. terminifera*'s
present.

8927

Acacia anura association. Trees - *Acacia anura*,
Acacia tetragonaphylla and an odd shrub of *Emicaphila*
spp. Pasture on the flat almost a pure sward of
Emicapegon nigricans with odd plants of *Chloris truncata*
and *Salsola Kali*. On a nearby sand ridge *Atriplex*
ferruginea, *Salsola Kali* with some *Arctostaphylos*
present. Dominant species here being the composite spp
as for 8909. Few adults of *Bh. terminifera* present.

8938

Gravelly downs. *Atriplex versicolor* association. Small scale
area present covered with fine quartzite gravel. Pasture
an even dense sward of *Emicapegon nigricans* with tufts
of *Eragrostis Dalzielii* and *sedgwickii*. *Stipa* spp. growing in
scattered tufts in close and on scald areas.

- 8948 Gravelly downs — *Atriplex canescens* association. Little vegetation present it being *Atriplex spongiosa* and a *Bassia* spp. Ch *terrestris* present in the solitary phase. *Rhus* in the fence posts. *Platanus* winged male seen.
- 8954 ^{Psychro-} Packsaddle Mt. Sand & Sandstone hill with shale scalds at the base. *Eriogonum fasciculatum* with odd clumps of *Stipa setacea* being the pasture. As one ascends the Mt. *Bassia lanicuspis* became the dominant, thinly scattered pasture on the lateritic outcrop of the hill.
- 8966 *Acacia anura* association. Trees. *A. anura*, few *Dodonaea* and *Cremophila* trees. Pasture. *Salicola Kali*, *Eriogonum* - these spp. being dominant. A sandy ridge present with small gravelly scalds on the flat area.
- 8974 *Acacia anura* association — Soil slightly sandy but compact. Trees. *Acacia anura*, *Hakea laevis* and dead *Cremophila*. Pasture — *Atriplex* spp. (annual) *Boerhaavia diffusa*, *Bassia lanicuspis*, and *Eriogonum nigrum*. Excellent ground cover of herbage. Remains of old *Kochia sedifolia* bushes evident.
- 8996 ^{*Austroicetes interioris*} Compact. Fowler's Gap. Lateritic hill — good cover of *Atriplex spongiosa* on the hills.
- 9006 Gravelly downs. Large nos. of *Periphragma*, *Pelaea*, *Platanus* spp. Pasture *Atriplex spongiosa* with odd clumps of *Stipa setacea*. *Astilbe laffana* in cracks. *Calcephalus* spp. dominant pasture spp. but in a dry state.

9011. Creek area in gravelly down. *Atriplex sericans* - *Koeberia setifolia* association. *Atriplex spongiosa* and *Bassia brachyptera* being dominant pasture spp. present. Creek lined with *Cercocarpus* trees.

9017. Gilder downs. - shallow washway and with *Koeberia setifolia* in odd clumps lining the bank about 1 bush depth. ^{*Austroicetes nullarborensis*} On stony downs and gully *Atriplex* spp. dominant. On crest of rise *Elymus* spp. dominant with *Calceophorus* spp. present as an occasional. *Ch. tenuifera* present on the solitary phase. ^{*Ch. tenuifera* sp. *C. tenuifera* sp.}

9022
9028 =
9037

Common - Rik call: ^{*ma. lora*, *Apotropa* sp., *Rebellen*}
Passed camp area and had to turn back 9028 - 9037
Flood creek area. Pasture present dense along the creek bank: - *Atriplex* spp. (annual) *Koeberia tomentosa*, *Gentiana melitensis* ^{*Austroicetes* *interioris*} and *Emm* spp. present. away from creek area sandy with little or no vegetation present.

9055
9056

Yancey Lfr. Hotel.

9080 Stephens Creek. Trip into Broken Hill back - 9090.

? 9090 Broken Hill.

9122 Left Broken Hill 21/1/29.

9121 Mt. Liffis. Gilder hills. Thin cover of *Elymus* spp. Saffron Thistle with odd bushes of *Koeberia setifolia* and *Atriplex sericans*. Trees present consisting of stunted *A. aurea* ^{*Austroicetes* *interioris*} and *Eremophila* spp. High wind blowing making collecting

difficult.

- 9151 Open treeless plain - red self-mulching soil with scattered areas dotted with fine stone. Dominant pasture being a small paper flowered composite (dry) with an occasional clump of *Astilbe elymoides* & *Kochia aphylla* bushes. Bk. *Terminifera* present in the solitary phase.
- 9165 Open flat plain - Trees - *Eremophila* spp. shrubs being scattered. Soil - compact red loam with the surface studded with fine gravel. Pasture scattered thorn with *Atriplex* spongiosa dominant, other components appearing being *Boerhaavia diffusa*, *Bassia divaricata*, *Eragrostis japonica* and *Dalzielia*. *Terminifera* again present in the solitary phase.
- 9171 *A. anura* association. - Trees. *Acacia anura* and odd *Eremophila* spp. ^{*Austrocyathus integrifolius*} Pasture - Mainly *Atriplex spongiosa* and a short cover of *Eragrostis* ^{*A. arida*} *Dalzielia* with odd plants of *Stipa setacea*, *Bassia lanuginosa* and *Salicola Kali*.
- 9181 *A. anura* association. - Scrub formation of *A. anura* with an odd tree of *Casuarina lepidophylla* - *Eremophila* spp. Pasture - dense dry stand of *Minuartia* spp. with an under cover of small *Stipa* plants. *Abutilon octocarpum* - *Salicola Kali* appearing as occasionals. Soil sandy. Bk. *Terminifera* on the solitary phase - all flyers.
- 9191 *A. anura* association. - Soil red & sandy. Trees - *A. anura* and *Eremophila*. Pasture thin and scattered consisting of *Stipa setacea*, *Atriplex spongiosa*, *Bassia uniflora* and

Tufts of *Enneapogon nigricans*, with an occasional bush of *Koehia aphylla* and *Eragrostis sedifolia* scattered throughout the area.

9195 Dolo. hill range - Rocky hills up to 150-200 ft high, covered with *Acacia aneura*. Little pasture present but *Enneapogon nigricans* to be found amongst the rocks on the slope. Near the crest some plants of *Digitaria* ^{*pushtocarpus interioris*} *Brucea* were evident. Most of the mulga being dead.

9201 Same range as for 9195 - hills here lower and similar to the gibbet downs. Timber present consisting of stunted *Casuarina lepidophlebia* - *Metrodendron ocellatum* with an under cover of *Bassia divaricata*, *Koehia aphylla*, with odd bushes of both *Koehia sedifolia* and *Atriplex vesicaria* occurring as occasionals.

9212 *Koehia sedifolia* association. Trees - *Flindersia maccullochi* on open woodland formation with a dense cover of *Koehia sedifolia* as an undercover. Soil - red self-mulching soil similar to the red myall type. Entire absence of grasshoppers. 1 *Oedipoda* male seen but not captured. Extremely high wind blowing.

9225 *Acacia aneura* association - Trees *A. aneura* with an occasional stunted *M. ocellatum*. Pasture - dominant species being *Stipa sp.* with *Enneapogon*. Herbage appearing as occasionals being *Bassia* spp. (round woolly head) and *Abutilon octocarpum*. Soil compact red loam. Ch. *Termitis* both on flying & nest stages. Solitary phase population.

- 9231 | Stony hill - *Acacia aneura* association. Trees - *Acacia aneura* with an occasional stunted bush of *Acacia tetragonophylla*. ^{*Austrocyathus interioris*} Pasture low in density with large gibbon scalds present. Dominant pasture spp. being *Bassia uniflora* with other scattered plants of *Trichunum obovatum*, *Eumapogon*, *Arctostida perichensis*, *Stipa setacea* and odd clumps of *Eragrostis setifolia*. *Ch. terminifera* present on the solitary phase.
- 9241 | *Wilcannia*. Campsite 1/2 mile on eastern bank of River Darling.
- 9246 | Left *Wilcannia*
- 9253 | *Atriplex vesicaria* association. Heavy gray self-mulching soil. Pasture sparse consisting of *Atriplex spongiosa* with some *Atriplex vesicaria* (numerous germinations of both species present). Water under all the bridges suggests that probably the whole area had recently been flooded. No grasshoppers present except for odd flying *Ch. terminifera* and some 2nd instar beetles.
- 9266 | *Boerhaavia lepidophylla* - *Heterostentor oleosum* association. ^{*Austrocyathus interioris*} Trees - *Het. oleosum*, *Boerhaavia lepidophylla* and *Haemata*. Dominant under shrub being *Eumapogon* spp. Soil compact loam raised in small dunes especially around fallen timber. Pasture of even density, consisting of *A. spongiosa*, *Eumapogon*, *Salsola*. Kala with a dense mat of *Boerhaavia diffusa* in shallow depressions throughout the area. *Cenchrus melitensis* growing in the table down. Solitary phase *Ch. terminifera* present.

- 9277 *Acacia amara* association. Trees present: *A. amara*, *Flindersia maculata* with an occasional *Het. oleosum*. Pasture on a red compact loam consisting of a tall stand of *Stipa setacea*; other herbage occurring as occasional being *Salsola Kali* - *Boerhaavia diffusa*.
- 9286 Stony gibber hill - *A. amara* association. Trees: *B. amara* with occasional *A. tetragonaphylla*. Pasture scattered clumps of *Barrua laniceps* with odd plants of *Atriplex spungosa*.
- 9291 Lunds: *Austrocyathes cruciata*, *A. interioris*, *Boerhaavia diffusa*, *Stipa setacea*, *Salsola Kali*.
- 9301 *Basuarina* - *Heterodendron* association. Trees - *Het. oleosum* dominant with an odd *Hakea laevis*. Timber in light cleared scrub formation. Soil red compact loam. Pasture - *Atriplex (annual)* *Salsola Kali*, - *Barrua laniceps* in isolated clumps.
- 9311 *Het. oleosum* - *Basuarina* association. Trees *Het. oleosum* *Austrocyathes interioris* *Eremophila* spp. with an occasional *Cas. lepidophylla*. Pasture a sparse mixture of *Eragrostis Dulacii* - *Atriplex fruticosa*, with large patches of young *Salsola Kali*.
- 9322 *Basuarina lepidophylla* - *Het.* association. Trees - *Basuarina* *Het. oleosum* with some *Eremophila* spp. - *B. amara* as an occasional. Soil red compact loam. Pasture not very dense due to the heavy cover of trees; main species present being *Barrua uniflora* - *Barrua* spp. - *Salsola Kali* with odd tufts of both *Stipa setacea* - *Eragrostis redifolia*. *Boerhaavia diffusa* present along the table drain.

9371 *Casuarina* - *Heterodendron* association. ^{*Acacia* *interioris*} Trees present being *Het. oleosum* (dominant), *Casuarina* and an odd *Geijera parviflora*. Soil red loam - gilgai shelf complex. Shelf area scalloped with stunted scattered tufts of *Stipa setacea* present, a *Goodenia* spp. Gilgais carrying a dense tussocky stand of *Eragrostis sedifolia* and *Bentleya melitensis*. Soil and herbage cover ideal as an outbreak centre complex. The tree cover however is probably the limiting factor as to its effectiveness as such.

9372 At humped. *C. pop.* *glauca* association. Dominant trees *C. intertexta*, *C. melioidora* - some *C. Blakelyi* with an occasional *Geijera parviflora*. Soil sandy. Trees large up to 80ft in parkland formation with practically no undergrowth. Dominant pasture being *Stipa pulcata*.

9349 *Casuarina* - *Heterodendron* association. - Trees - *Het. oleosum* some *C. populifolia*, *Casuarina lepidophloia* with an occasional *Cremophila Mitchellii* and *Geijera parviflora*. The pasture here particularly thin and thin confined to cleared areas only. Most of the area covered with red small ironstone g. b. lers. Pasture. *Stipa setacea* in clumps with some *Erag. Dietrichii* & *Salsola Natalis*.

9359 ^{*Acacia* *interioris*} Open area - *Acacia* *interioris* *Casuarina* & *Heacium* association. Trees: - *Casuarina lepidophloia*, *C. glauca*, *Geijera parviflora*, *C. oleosa*, *Het. oleosum*, & *Alphophyllum anomolus*. Tree area fairly dense, adjacent to wash, a cleared area. Pasture not existent under the trees.

On the cleared area the pasture being particularly thin & scattered, chief of which was *Chloris truncata* and *Eragrostis nigrescens*. *Centropogon melitensis* was present along the table drain and also through the pasture in patches. The dominant spp. however was a small white paper-leaf daisy, but in a dry state.

9268 Stony ridge. Trees - *E. verticillata* & glaucous *A. umbra*. Pasture - the area being extremely bare except for isolated patches of *Arctostaphylos* and *Eragrostis*. On the slope of the ridge a few heavily grazed tufts of *Eragrostis* were evident. Much fallen timber present. No sign of any grasshoppers, not even *C. terminifera*.

9280. Gilder slope ^{*Oedalyptus australis*, *Qualeya nana*, *Psychotria*, *Chorizanthe*} - This area being covered to a large extent by red ironstone gilders small in size. ^{*terminifera*, *Austrocyathus arida*} The area having a light cover of paper leaf-daisy.

9291 Lunch.

9299 Latent hill :- Timber *Guarea parviflora* with an odd stunted *Casuarina* and *F. lindleyana* maculata. Hill bare & stony except for a light cover of *Stipa pulchra* & some *Chloris truncata*.

9409 Labor.

clear area. The pasture consists of *Stipa pulcata*,
Danthonia and tussocks of *Horridula calycina*
Ch. terminifera present in the solitary phase only.
Macrotona present as nymphs in the *Horridula* tussocks.

9466. E. pop. - *C. glauca* association. ^{*Macrolophosia* sp., *Lonicera* sp., *Qualeya*}
 hill. Trees scattered being *C. populifolia*, *A. cotinifolia*,
Eremophila Mitchellii with an occasional *Cassia*
 (wild orange). Pasture patchy; soil gravelly scalds
 present. Pasture in patches dense & tussocky consisting
 of *Horridula calycina*, *Stipa pulcata* with clumps
 of *Dicranthum sericeum* & *Bassia uniflora*.

9476 E. pop. - *C. glauca* association. ^{*Pyrostictus ciliatus*, *Lonicera*}
C. populifolia - ^{*fuscomaculata*} *Lonicera parviflora* - *Eremoph. Mitchellii*
 with an occasional *C. intertexta*. Pasture thin &
 sparse being made up of *Stipa pulcata*, *Bassia*
uniflora, *Salicola Kali* & clumps of *Saffron Thistle*.

9489 Nyngan —